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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/625,717

07/25/2000

Tomoyuki Ueno

FUJI 17.563

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05/04/2004

Katten, Muchin, Zavis & Rosenman
575 Madison Ave.
New York, NY 10022-2585

EXAMINER

RYMAN, DANIEL J

ART UNIT

PAPER NUMBER

2665

DATE MAILED: 05/04/2004

4

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/625,717

Applicant(s)

UENO, TOMOYUKI

Examiner

Daniel J. Ryman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 July 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☒ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 July 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character “1” has been used to designate both a mobile station and a wireless channel (see page 1, line 32-page 2, line 6). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character “2” has been used to designate both a base station and a wireless channel (see page 1, line 32-page 2, line 6). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.
3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character “3” has been used to designate both a base station controller and a wireless channel (see page 1, line 32-page 2, line 6). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

4. The disclosure is objected to because of the following informalities: on page 2, line 28 “downward” should be “downward transmission”; on page 2, line 30 “upward” should be “upward transmission”; on page 7, line 8, page 7, line 28, and page 22, line 12 “rout(s)” should be “route(s)”; and on page 20, line 17 “is not limit” should be “does not limit”.

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Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 4-6 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 4 discloses "... integrating said bearer service data into a wireless channel in which delays ...". Claim 4 does not disclose with what the bearer service data is integrated. For the purposes of prior art rejections, Examiner will interpret claim 4 to read "... integrating said bearer service data into a wireless channel with another bearer service data in which delays...".

7. In addition, claim 6 does not disclose for which bearer service (A, B, or C) the "first bearer frame" is delayed, for which bearer service (A, B, or C) the "bearer frames after the second bearer frame" are delayed; for which bearer service (A, B, or C) the "bearer frames after the third bearer frame" are delayed. Since Examiner is unable to determine the metes and bounds of the claim and therefore the Examiner cannot determine a reasonable interpretation for the claim, Examiner will not examine the claim for the purposes of prior art rejections.

8. Claims 8-11 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with

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which it is most nearly connected, to make and/or use the invention. Claim 8 discloses in lines 14-17 "... integrating said bearer service data into a wireless channel in which delays ...". Claim 8 does not disclose with what the bearer service data is integrated. For the purposes of prior art rejections, Examiner will interpret claim 8 to read "... integrating said bearer service data into a wireless channel with another bearer service data in which delays...".

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 5, 6, and 8-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

11. Regarding claim 5, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d). For the purposes of prior art rejections, Examiner will interpret claim 5 to read "... delay allocation into a wireless channel C in which delays T+C ...".

12. Claim 8 recites the limitation "the maximum allowable delay" in lines 8-9. There is insufficient antecedent basis for this limitation in the claim.

13. Regarding claim 8, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d). For the purposes of prior art rejections, Examiner will interpret claim 8, lines 19-22 to read "... delay allocation into a wireless channel C in which delays T+C ...".

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art in view of Dupuy (USPN 5,430,774).

16. Regarding claim 1, Applicant admits as prior art a bearer integration method for integrating a plurality of bearer services into a wireless channel by performing time-division multiplexing/demultiplexing (Figs. 1-5 and page 1, line 33-page 9, line 30), said bearer integration method comprising the steps of: inputting bearer service data in synchronization with reference frame timing of a period T in a sending side (Figs. 1-5 and page 1, line 33-page 9, line 30); outputting said bearer service data in the receiving side (Figs. 1-5 and page 1, line 33-page 9, line 30); and integrating said bearer service data into a wireless channel with another bearer service data (Figs. 1-5 and page 1, line 33-page 9, line 30). Applicant does not disclose as prior art delaying said bearer service data by one frame period by allocating delays A ($0 \leq A \leq T$) and A' ($A' = T - A$) between the sending side and a receiving side or that the another bearer service has delays B ($A \leq B \leq T$) and B' ($B' = T - B$) which are allocated between the sending side and the receiving side; however, Applicant does disclose as prior art having a gap in the data stream due to frame misalignment. Dupuy teaches, in a wireless communication system, eliminating a gap in the data stream caused by frame misalignment by adding a delay to the data stream in order to decrease synchronization time (Figs. 1 and 2; col. 2, line 51-col. 3, line 11; col. 3, line 34-col. 4,

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line 14; and col. 6, lines 1-19). It would have been obvious to one of ordinary skill in the art at the time of the invention to delay the bearer service data by allocating delays between the sending side and a receiving side, and to have the another bearer service have delays which are allocated between the sending side and the receiving side in order to eliminate a gap in the data stream such that synchronization time is decreased. Applicant's admitted prior art in view of Dupuy does not expressly disclose allocating a delay of one frame period; however, Applicant's admitted prior art in view of Dupuy does disclose allocating a delay. It is generally considered to be within the ordinary skill in the art to adjust, vary, select, or optimize the numerical parameters or values of any system absent a showing of criticality in a particular recited value. The burden of showing criticality is on applicant. In re Mason, 87 F.2d 370, 32 USPQ 242 (CCPA 1937); Marconi Wireless Telegraph Co. v. U.S., 320 U.S. 1, 57 USPQ 471 (1943); In re Schneider, 148 F.2d 108, 65 USPQ 129 (CCPA 1945); In re Aller, 220 F.2d 454, 105 USPQ 233 (CCPA 1055); In re Saether, 492 F.2d 849, 181 USPQ 36 (CCPA 1974); In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977); In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Since Applicant's admitted prior art in view of Dupuy discloses allocating a delay, any delay, include one frame period, would have been obvious absent a showing of criticality by Applicant. Thus, Applicant's admitted prior art in view of Dupuy suggests delaying said bearer service data by one frame period by allocating delays A ($0 \leq A \leq T$) and A' ($=T-A$) between the sending side and a receiving side, where the language of the claim only requires allocating a single delay of one time frame. Applicant's admitted prior art in view of Dupuy also suggests that the another bearer service has delays B ($A \leq B \leq T$) and B' ($=T-B$) which are allocated between the sending

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side and the receiving side, where the language of the claim only requires allocating a single delay of one time frame.

17. Regarding claim 2, referring to claim 1, Applicant's admitted prior art in view of Dupuy suggests that when integrating bearer services in which each bearer service has different delay allocation, said bearer services are integrated into a wireless channel which has a delay equal to or larger than the maximum delay in said bearer services (Applicant: Figs. 1-5 and page 1, line 33-page 9, line 30 and Dupuy: Figs. 1 and 2; col. 2, line 51-col. 3, line 11; col. 3, line 34-col. 4, line 14; and col. 6, lines 1-19). It is implicit that when streams of varying delay are integrated that the combined stream will have a delay equal to or larger than the maximum delay of the individual streams, and therefore the channel into which the stream is integrated must have a delay equal to or larger than the maximum delay of the individual streams.

18. Regarding claim 3, referring to claim 1, Applicant's admitted prior art in view of Dupuy discloses integrating one or more bearer services having any delay allocation into another bearer service having any delay allocation (Applicant: Figs. 1-5 and page 1, line 33-page 9, line 30 and Dupuy: Figs. 1 and 2; col. 2, line 51-col. 3, line 11; col. 3, line 34-col. 4, line 14; and col. 6, lines 1-19).

19. Regarding claim 4, Applicant's admitted prior art discloses a bearer integration method for integrating a plurality of bearer services into a wireless channel by performing time-division multiplexing/demultiplexing (Figs. 1-5 and page 1, line 33-page 9, line 30), said bearer integration method comprising the steps of: inputting bearer service data in synchronization with reference frame timing of a period T in a sending side (Figs. 1-5 and page 1, line 33-page 9, line 30); outputting said bearer service data in the receiving side (Figs. 1-5 and page 1, line 33-page

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9, line 30); and integrating said bearer service data into a wireless channel with another bearer service data (Figs. 1-5 and page 1, line 33-page 9, line 30). Applicant does not disclose as prior art delaying said bearer service data by two frame period by allocating delays A ($0 \leq A \leq T$) and $A' (=2T-A)$ between the sending side and a receiving side or that the another bearer service has delays $T+B$ ($0 \leq B \leq T$) and $B' (=T-B)$ which are allocated between the sending side and the receiving side; however, Applicant does disclose as prior art having a gap in the data stream due to frame misalignment. Dupuy teaches, in a wireless communication system, eliminating a gap in the data stream caused by frame misalignment by adding a delay to the data stream in order to decrease synchronization time (Figs. 1 and 2; col. 2, line 51-col. 3, line 11; col. 3, line 34-col. 4, line 14; and col. 6, lines 1-19). It would have been obvious to one of ordinary skill in the art at the time of the invention to delay the bearer service data by allocating delays between the sending side and a receiving side, and to have the another bearer service have delays which are allocated between the sending side and the receiving side in order to eliminate a gap in the data stream such that synchronization time is decreased. Applicant's admitted prior art in view of Dupuy does not expressly disclose allocating a delay of two frame periods; however, Applicant's admitted prior art in view of Dupuy does disclose allocating a delay. It is generally considered to be within the ordinary skill in the art to adjust, vary, select, or optimize the numerical parameters or values of any system absent a showing of criticality in a particular recited value. The burden of showing criticality is on applicant. In re Mason, 87 F.2d 370, 32 USPQ 242 (CCPA 1937); Marconi Wireless Telegraph Co. v. U.S., 320 U.S. 1, 57 USPQ 471 (1943); In re Schneider, 148 F.2d 108, 65 USPQ 129 (CCPA 1945); In re Aller, 220 F.2d 454, 105 USPQ 233 (CCPA 1055); In re Saether, 492 F.2d 849, 181 USPQ 36 (CCPA 1974); In re Antonie, 559 F.2d 618, 195

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USPQ 6 (CCPA 1977); In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Since Applicant's admitted prior art in view of Dupuy discloses allocating a delay, any delay, include two frame periods, would have been obvious absent a showing of criticality by Applicant. Thus, Applicant's admitted prior art in view of Dupuy suggests delaying said bearer service data by two frame periods by allocating delays A ($0 \leq A \leq T$) and $A' (=2T-A)$ between the sending side and a receiving side, where the language of the claim only requires allocating a single delay of one time frame. Applicant's admitted prior art in view of Dupuy also suggests that the another bearer service has delays $T+B$ ($0 \leq B \leq T$) and $B' (=T-B)$ which are allocated between the sending side and the receiving side, where the language of the claim only requires allocating a single delay of two time frames.

20. Regarding claim 5, referring to claim 4, Applicant's admitted prior art in view of Dupuy suggests integrating bearer services in which each bearer service has different delay allocation into a wireless channel C in which delays $T+C$ ($0 \leq C \leq T$) and $C' (=T-C)$ are allocated (Applicant: Figs. 1-5 and page 1, line 33-page 9, line 30 and Dupuy: Figs. 1 and 2; col. 2, line 51-col. 3, line 11; col. 3, line 34-col. 4, line 14; and col. 6, lines 1-19). It is implicit that when streams of varying delay are integrated that the combined stream will have a delay equal to or larger than the maximum delay of the individual streams, and therefore the channel into which the stream is integrated must have a delay equal to or larger than the maximum delay of the individual streams.

21. Regarding claim 7, referring to claim 1, Applicant's admitted prior art in view of Dupuy suggests that a point of delay allocation between the sending side and the receiving side corresponds to frame offset timing of a system (Applicant: Figs. 1-5 and page 1, line 33-page 9,

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line 30 and Dupuy: Figs. 1 and 2; col. 2, line 51-col. 3, line 11; col. 3, line 34-col. 4, line 14; and col. 6, lines 1-19) since the delay is intended to ensure that the frames of a stream align in the receiver.

22. Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art in view of Edem et al (USPN 5,559,796).

23. Regarding claim 12, Applicant admits as prior art a communication apparatus in a wireless communication system which integrates a plurality of bearer services into a wireless channel by performing time-division multiplexing/demultiplexing (Figs. 1-5 and page 1, line 33-page 9, line 30), said communication apparatus comprising: a bearer data multiplexing part which time-division multiplexes a plurality of bearer service data output from a part (Figs. 1-5 and page 1, line 33-page 9, line 30). Applicant does not admit as prior art a send delay adding part which synchronizes with reference frame timing, delays one or more bearer service data input before bearer integration timing up to each frame offset timing, and delays a plurality of bearer service data input after bearer integration timing up to frame offset timing for bearer integration. Edem teaches, in a frame-based communication network, having a send delay adding part which synchronizes with reference frame timing, delays one or more frames input before integration timing (multiplexing) up to each frame offset timing (timing done before "re-timing"), and delays a plurality of frames input after integration timing up to frame offset timing for bearer integration ("re-timing") in order to synchronize the frames to the multiplexed frame sequence (col. 2, line 51-64) where "re-timing" of data implicitly discloses that the data was previously timed before multiplexing such that the data was delayed before multiplexing and where "re-timing" of data discloses that the data is delayed for multiplexing. It would have been

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obvious to one of ordinary skill in the art at the time of the invention to have a send delay adding part which synchronizes with reference frame timing, delays one or more frames input before integration (multiplexing) timing up to each frame offset timing, and delays a plurality of frames input after integration timing up to frame offset timing for bearer integration in order to synchronize the frames to the multiplexed frame sequence.

24. Regarding claim 13, Applicant admits as prior art a communication apparatus in a wireless communication system which integrates a plurality of bearer services into a wireless channel by performing time-division multiplexing/demultiplexing (Figs. 1-5 and page 1, line 33-page 9, line 30), said communication apparatus comprising: a bearer data separation part which time division demultiplexing data of bearer integration received via a wireless channel (Figs. 1-5 and page 1, line 33-page 9, line 30). Applicant does not disclose as prior art a receive delay adding part which delays one or more bearer service data input before bearer integration timing up to reference frame timing, and delays each bearer service data output from said bearer data separation part after bearer integration timing up to frame offset timing. Edem teaches, in a frame-based communication network, having a receive delay adding part which delays one or more bearer service data input before bearer integration timing up (multiplexed stream) to reference frame timing, and delays each bearer service data output from said bearer data separation part after bearer integration timing up to frame offset timing (demultiplexed steam) in order to have the relative timing of the frames be substantially similar to the timing of the frames before integration (col. 2, line 51-64) where Examiner takes official notice that a delay is typically added when a multiplexed stream is received since it takes time to process a stream of data. It would have been obvious to one of ordinary skill in the art at the time of the invention to

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have a receive delay adding part which delays one or more bearer service data input before bearer integration timing up (multiplexed stream) to reference frame timing, and delays each bearer service data output from said bearer data separation part after bearer integration timing up to frame offset timing (demultiplexed steam) in order to have the relative timing of the frames be substantially similar to the timing of the frames before integration.

Allowable Subject Matter

25. Claims 8-11 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action, and if the rejection(s) under 35 U.S.C. 112, first paragraph, are resolved according to Examiner's interpretation. The prior art does not disclose or fairly suggest allocating a delay time according to a delay margin obtained by subtracting a system delay from the maximum allowable delay defined by service quality.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Ryman whose telephone number is (703)305-6970. The examiner can normally be reached on Mon.-Fri. 7:00-5:00 with every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (703)308-6602. The fax phone number for the organization where this application or proceeding is assigned is (703)308-6743.

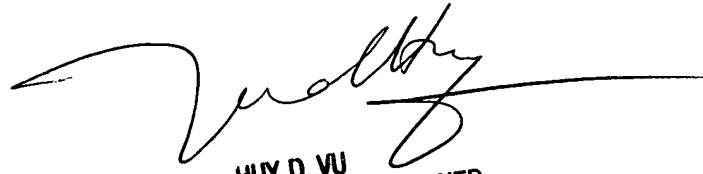
Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-3900.

Daniel J. Ryman

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Examiner
Art Unit 2665

DR
Daniel J. Ryman


HUY D. VU
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